

in the late winter and spring during the prolonged dry season while they are generally leafless, releasing their seeds previous to the summer rains beginning in June.

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### A SUMMARY OF THE NOMENCLATURE OF DOUGLAS-FIR, PSEUDOTSUGA MENZIESII

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EDITOR'S NOTE. In January, 1956, the Editors of MADROÑO received from Dr. Krajina a manuscript presenting a careful and exhaustive treatment of "The Nomenclatural Problem of Common Douglas-Fir," and substantiating the adoption of the combination *PSEUDOTSUGA MENZIESII* (Mirb.) Franco, made in 1950. While Dr. Krajina's manuscript was in the hands of the Editorial Board, a series of papers, treating various facets of the same subject and finally reaching the same conclusion as had Dr. Krajina, appeared in "Taxon" [5(1, Febr.): 4-7, 18, 19, 1956; 5(2, Apr.): 38-39, 1956; 5(3, May): 41-43, 43-46, 1956]. Dr. Krajina has consented, therefore, to the deletion of the first two-thirds of his manuscript in which he covered in great detail the history of the problem. The balance of his paper, in slightly revised form, is published herewith.—Ed.

There are not many species nomenclaturally so interesting as the common Douglas-fir. A resume of the events involved with the first collections made of this tree sheds light on some of the sources of the confusion concerning the proper name which should be applied to it.

About the discovery of *Abies Douglasii* (Sabine mss.) Thomas Nuttall (1865) wrote as follows: "This species was originally discovered by Mr. Menzies at Nootka Sound, in 1797, during the voyage of Captain Vancouver, and from a specimen without cones or flowers was published a description by Mr. Lambert, under the name of *Pinus taxifolia*, . . ." Sargent (1898), who, in his "Silva of North America," accepted the name *Pseudotsuga mucronata* (Raf.) Sudw., makes the following statement about its early history, "*Pseudotsuga mucronata* was discovered in 1791 on the shores of Nootka Sound by Archibald Menzies, the surgeon of Vancouver in his voyage of discovery; it was first described in the journal of Lewis and Clark. Rediscovered by David Douglas in 1827, it was introduced by him into the gardens of Europe, where it has become one of the

best known and most valuable coniferous trees for park plantations." Similarly, Little (1952; 1953) published that Menzies' type-specimen of *Pinus taxifolia* Lamb. was collected at Nootka Sound on Vancouver Island in 1791. However, H. J. Elwes and Augustine Henry (1909) published the following reliable historical data: "The Douglas fir was discovered by Menzies at Nootka Sound in 1797. Seeds were, however, first sent home by Douglas in 1827, from which plants were raised by the Horticultural Society of London and distributed throughout the country."

The first (illegitimate) name, *Pinus taxifolia* Lamb. (1803), was based upon the collection made by Menzies in 1797. Similarly, the second (illegitimate) name, *Abies taxifolia* Poir. (1805), as well as the correct specific basonym, *Abies menziesii* Mirb. (1825), are based upon Lambert's description of the material collected by Menzies.

In 1832 were published two synonyms of *Abies menziesii* Mirb.: the first, *Pinus douglasii* Sabine ex D. Don in Lamb., was based on the original collection by Menzies, complemented by the fruiting material sent to Europe in 1827 by David Douglas; the other synonym is the name published by Rafinesque in the autumn of 1832, *Abies mucronata*. It was based upon the field description by Lewis and Clark (cf. Coues, 1893), the specimens collected by Meriwether Lewis in 1805 and 1806 having been sent to Pursh (1814) who accepted the name *Pinus taxifolia* for them.

Thus, common Douglas-fir was discovered by Archibald Menzies in 1797 at Nootka Sound on Vancouver Island. Another collection was made by Meriwether Lewis on the banks of the Columbia River in 1805-1806. From the same region, cones and other material were collected by David Douglas and sent to Europe in 1827. On these three collections rest the eighteen names that have been applied to this tree.

The complete synonymy [omitting that pertaining to *Pseudotsuga menziesii* var. *glauca* (Beissn.) Franco, which was thoroughly discussed by Little (1953)] follows:

PSEUDOTSUGA MENZIESII (Mirb.) Franco, De Coniferarum duarum nominibus. 4. May, 1950. — Franco, *Cedrus libanensis* et *Pseudotsuga menziesii*. Bol. Soc. Brot. (Coimbra), sér. 2, 24: 74. July, 1950. — Franco, Notas sobre a flora lenhosa da Mata do Buçaco. Bol. Soc. Brot. (Coimbra), sér. 2, 25: 206. 1951. — Little, Check list of native and naturalized trees. Agr. Handb. 41: 305. 1953.

*Pinus taxifolia* Lamb., Descr. Genus Pinus 1: 51, pl. 33. 1803; *nomen illegit.* Non *Pinus taxifolia* Salisb. Prodr. 399. 1796, a synonym of *Abies balsamea* (L. 1753) Mill. 1768.

*Abies taxifolia* [(Lamb.)] Poir. in Lamarck, Encycl. Méth. Bot. 6: 523. 1805; *nomen illegit.* Non *Abies taxifolia* Mus. ex Du Tour, Nouv. Dict. Hist. Nat. 20: 114. 1803, *pro syn.* (a name not validly published). Non *Abies taxifolia* Desf. Tabl. École Bot. Mus. Hist. Nat. 206. 1804, a syno-

nym of *Abies alba* Mill. 1768. Non *Abies taxifolia* Raf., New Flora N. Am. 1: 38. 1838, a synonym of *Tsuga canadensis* (L. 1763) Carr. 1855.

*Abies menziesii* Mirb., Paris Mus. Hist. Nat. Mem. 13: 63, 70. 1825 (as "Menziezii"). Non *Abies menziesii* (Dougl.) Lindl., Penny Cyclop. 1: 32. 1833, based on *Pinus menziesii* Dougl. ex D. Don in Lamb., Descr. Genus Pinus, ed. 3 (8°), 2: unnumbered page between pp. 144 and 145. 1832, a synonym of *Picea sitchensis* (Bong. 1832) Carr. 1855.

*Abies douglasii* Hort. ex Loud., Hort. Brit. 388. 1830; *nomen nudum*.

*Pinus douglasii* Sabine ex D. Don in Lamb., Descr. Genus Pinus, ed. 3 (8°), 2: unnumbered page between pp. 144 and 145, pl. [47]. 1832.

*Abies mucronata* Raf., Atl. Jour. 1: 120. 1832 (autumn).

*Abies douglasii* (Sabine ex D. Don in Lamb.) Lindl., Penny Cycl. 1: 32, illus. 1833.

*Abies douglasii* var. *taxifolia* Loud., Arboretum et Frut. Britannicum 4: 2319, fig. 2231. 1838.

*Picea douglasii* (Sabine ex D. Don in Lamb.) Link in Linnaea 15: 524. 1841.

*Tsuga douglasii* (Lindl.) Carr., Traité Gen. Conif. 192. 1855.

*Pseudotsuga douglasii* (Lindl.) Carr., Traité Gen. Conif., ed. 2, 256. 1867.

*Pseudotsuga taxifolia* [(Lamb.)] Britton, N.Y. Acad. Sci. Trans. 8: 74. 1889.

*Tsuga taxifolia* [(Lamb.)] Kuntze, Rev. Gen. Pl. 2: 802. 1891.

*Pseudotsuga mucronata* (Raf.) Sudw. in Holz., Contr. U. S. Nat. Herb. 3: 266. 1895.

*Pseudotsuga taxifolia* (Poir.) Britton ex Sudw., U. S. Dept. Agr., Div. Forestry Bull. 14: 46. 1897.

*Abietia douglasii* (Lindl.) Kent, Veitch's Man. Conif., ed. 2, 476. 1900.

*Pseudotsuga vancouverensis* Flous, Soc. d'Hist. Nat. Toulouse Bull. 66: 340, pl. 1934; Lab. Forest. Toulouse Trav. tome 1, v. 2, art. 6: 12, pl. 1934.

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